

Contents of Volume

Volume 52 No. 1

ENVIRONMENTAL TOXICOLOGY AND RISK ASSESSMENT

- 1 Cyanobacterial toxins: a growing environmental concern
S. HAIDER, V. NAITHANI, P. N. VISWANATHAN & P. KAKKAR (India)
- 23 Assessment of bioconcentration and secondary poisoning of surfactants
M. H. I. COMBER (UK), W. DE WOLF (Belgium), L. CAVALLI (Italy), R. VAN EGMOND (UK), J. STEBER (Germany), L. TATTERSFIELD & R. A. PRISTON (UK)
- 33 Estrogenic and thyroid hormone activity of a series of hydroxy-polychlorinated biphenyls
F. SHIRAIISHI, T. OKUMURA, M. NOMACHI, S. SERIZAWA, J. NISHIKAWA, J. S. EDMONDS, H. SHIRAIISHI & M. MORITA (Japan)
- 43 The influence of untreated wastewater to aquatic communities in the Balatun River, The Philippines
S. D. DYER (USA), C. PENG (Japan), D. C. MCAVOY, N. J. FENDINGER (USA), P. MASSCHELEYN (Belgium), L. V. CASTILLO & J. M. U. LIM (Philippines)
- 55 Risk assessment approach for untreated wastewater using the QUAL2E water quality model
D. C. MCAVOY (USA), P. MASSCHELEYN (Belgium), C. PENG (Japan), S. W. MORRALL (USA), A. B. CASILLA, J. M. U. LIM & E. G. GREGORIO (The Philippines)
- 67 Deriving freshwater quality criteria for 2,4,6-trichlorophenol for protection of aquatic life in China
D. YIN, S. HU, H. JIN & L. YU (China)
- 75 Influence of water hardening of the chorion on cadmium accumulation in medaka (*Oryzias latipes*) eggs
M. GONZÁLEZ-DONCEL (Spain, USA), M. LARREA, S. SÁNCHEZ-FORTÚN (Spain) & D. E. HINTON (USA)
- 85 Toxicity identification evaluation of leachates from municipal solid waste landfills: a multispecies approach
M. ISIDORI, M. LAVORGNA, A. NARDELLI & A. PARRELLA (Italy)
- 95 Cyst-based toxicity tests XVI—sensitivity comparison of the solid phase *Heterocypris incongruens* microtest with the *Hyalella azteca* and *Chironomus riparius* contact assays on freshwater sediments from Peninsula Harbour (Ontario, Canada)
Z. C. BELGIS (Panama, Belgium), G. PERSOONE (Belgium) & C. BLAISE (Canada)
- 103 Specific detection of organotin compounds with a recombinant luminescent bacteria
M. J. DURAND, G. THOUAND, T. DANCHEVA-IVANOVA, P. VACHON & M. DUBOW (France)
- 113 Lanthanum fixation by *Myxococcus xanthus*: cellular location and extracellular polysaccharide observation
M. L. MERROUN, K. BEN CHEKROUN, J. M. ARIAS & M. T. GONZÁLEZ-MUNOZ (Spain)
- 121 In situ monitoring of urban air in Southern Italy with the tradescantia micronucleus bioassay and semipermeable membrane devices (SPMDs)
M. ISIDORI, M. FERRARA, M. LAVORGNA, A. NARDELLI & A. PARRELLA (Italy)
- 127 Evaluation of the effect on arthropod populations by using deltamethrin to control *Phloeotribus scarabaeoides* Bern. (Coleoptera: Scolytidae) in olive orchards
E. RODRÍGUEZ, A. PEÑA, A. J. SÁNCHEZ RAYA & M. CAMPOS (Spain)
- 135 Waterborne and sediment toxicity of fluoxetine to select organisms
B. W. BROOKS, P. K. TURNER, J. K. STANLEY, J. J. WESTON, E. A. GLIDEWELL, C. M. FORAN, M. SLATTERY, T. W. LA POINT & D. B. HUGGETT (USA)
- 143 Evaluation and further development of the activated sludge respiration inhibition test
C. GENDIG, G. DOMOGALA (Germany), F. AGNOLI (Italy), U. PAGGA & U. J. STROTMANN (Germany)
- 151 Degradation of juvenile hormone analog by soil microbial isolates
J. NOVÁK, V. VLASÁKOVÁ, R. TYKVA & T. RUML (Czech Republic)
- 161 In situ cadmium reclamation by freshwater bivalve *Lamellidens marginalis* from an industrial pollutant-fed river canal
S. DAS & B. B. JANA (India)
- 175 Microbiological reduction of chromium(VI) in presence of pyrolusite-coated sand by *Shewanella alga* Simidu ATCC 55627 in laboratory column experiments
H. GUHA, K. JAYACHANDRAN & F. MAURRASSE (USA)

- 185 Separation of the strength and selectivity of the microbiological effect of synthetic dyes by spectral mapping technique
G. OROS, T. CSERHÁTI & E. FORGÁCS (Hungary)
- 195 Investigation of acute toxicity and the effect of 2,4-D (2,4-dichlorophenoxyacetic acid) herbicide on the behavior of the common carp (*Cyprinus carpio* L., 1758; Pisces, Cyprinidae)
R. SARIKAYA & M. YILMAZ (Turkey)
- 203 Use of oxytetracycline and tylosin in intensive calf farming: evaluation of transfer to manure and soil
M. DE LIGUORO, V. CIBIN, F. CAPOLOGO (Italy), B. HALLING-SØRENSEN (Denmark) & C. MONTESISSA (Italy)
- 213 Effects of dietary habits and CYP1A1 polymorphisms on blood dioxin concentrations in Japanese men
Y. TSUCHIYA, S. NAKAI, K. NAKAMURA, K. HAYASHI, J. NAKANISHI & M. YAMAMOTO (Japan)
- 221 A new method to study biodegradation kinetics of organic trace pollutants by activated sludge
H. TEMMINK & B. KLAPWIJK (The Netherlands)
- 231 Organochlorine pesticides, PCBs and heavy metals in tissues of the mullet *Liza aurata* in lake Ganzirri and Straits of Messina (Sicily, Italy)
P. LICATA, G. DI BELLA, G. DUGO & F. NACCARI (Italy)
- 239 Phenolic compounds content in *Pinus halepensis* Mill. needles: a bioindicator of air pollution
V. PASQUALINI, C. ROBLES, S. GARZINO, S. GREFF, A. BOUSQUET-MELOU & G. BONIN (France)
- 249 Influence of pH on the toxicity of nitrophenols to Microtox[®] and Spirotox tests
G. NAŁĘCZ-JAWECKI & J. SAWICKI (Poland)
- 253 Emission factors and sources of ethylene-diaminetetraacetic acid in waste water—a case study
M. FUERHACKER, G. LORBEER & R. HABERL (Austria)
- 259 Investigation of acute toxicity of cadmium chloride ($\text{CdCl}_2 \cdot \text{H}_2\text{O}$) metal salt and behavioral changes it causes on water frog (*Rana ridibunda* Pallas, 1771)
M. SELVI, A. GÜL & M. YILMAZ (Turkey)
- 265 Potential availability of heavy metals to phytoextraction from contaminated soils induced by exogenous humic substances
M. HALIM (Morocco), P. CONTE & A. PICCOLO (Italy)
- 277 Bactericidal effect of TiO_2 photocatalyst on selected food-borne pathogenic bacteria
B. KIM, D. KIM, D. CHO & S. CHO (South Korea)
- 283 Testicular histopathology in deer mice (*Peromyscus maniculatus*) following exposure to polychlorinated biphenyl
D. A. ALSTON, B. TANDLER, B. GENTLES & E. E. SMITH (USA)

Volume 52 No. 2

SPECIAL ISSUE: NATURALLY PRODUCED ORGANOHALOGENS

287 Preface

Reviews

- 289 The diversity of naturally produced organohalogenes
G. W. GRIBBLE (USA)
- 299 Biological dehalogenation and halogenation reactions
K.-H. VAN PÉE & S. UNVERSUCHT (Germany)
- 313 Pattern and sources of naturally produced organohalogenes in the marine environment: biogenic formation of organohalogenes
K. BALLSCHMITER (Germany)
- 325 The role of halogen species in the troposphere
U. PLATT & G. HÖNNINGER (Germany)

- 339 Fluxes of trichloroacetic acid between atmosphere, biota, soil, and groundwater
H. F. SCHÖLER, F. KEPPLER, I. J. FAHIMI & V. W. NIEDAN (Germany)
- 355 Review of concentrations and chemistry of trichloroacetate in the environment
E. J. HOEKSTRA (Italy)
- 371 Sense or *no*-sense of the sum parameter for water soluble "adsorbable organic halogens" (AOX) and "absorbed organic halogens" (AOX-S18) for the assessment of organohalogens in sludges and sediments
G. MÜLLER (Germany)

Field measurements

- 381 Chloride imbalances in soil lysimeters
M. RODSTEDTH, C. STAHLBERG, P. SANDÉN & G. ÖBERG (Sweden)
- 391 Spatial patterns of organic chlorine and chloride in Swedish forest soil
E. JOHANSSON, P. SANDÉN & G. ÖBERG (Sweden)
- 399 Occurrence and source of brominated organic compounds in surface waters
A. PUTSCHEW, M. MANIA & M. JEKEL (Germany)
- 409 Di- and tribromindoles in the common oyster (*Crassostrea virginica*)
K. A. MARUYA (USA)
- 415 Non-polar halogenated natural products bioaccumulated in marine samples.
I. 2,3,3',4,4',5,5'-Heptachloro-1'-methyl-1,2'-bipyrrole (Q1)
W. VETTER, W. JUN & G. ALTHOFF (Germany)
- 423 Non-polar halogenated natural products bioaccumulated in marine samples.
II. Brominated and mixed halogenated compounds
W. VETTER & W. JUN (Germany)
- 433 The distinctive isotopic signature of plant-derived chloromethane: possible application in constraining the atmospheric chloromethane budget
D. B. HARPER, J. T. G. HAMILTON, V. DUCROCQ, J. T. KENNEDY, A. DOWNEY & R. M. KALIN (UK)
- 437 Uptake, translocation and fate of trichloroacetic acid in a Norway spruce/soil system
P. SCHRÖDER (Germany), M. MATUCHA, S. T. FORCZEK, H. UHLÍŘOVÁ, K. FUKSOVÁ & J. ALBRECHTOVÁ (Czech Republic)
- 443 Input of trichloroacetic acid into the vegetation of various climate zones—measurements on several continents
L. WEISSFLOG (Germany), G. KRÜGER (South Africa), N. ELANSKY (Russia), E. PUTZ (Austria), A. PFENNIGSDORFF, K.-U. SEYFARTH, M. NÜCHTER, C. LANGE & K. KOTTE (Germany)
- 451 Peatlands: a major sink of naturally formed organic chlorine
F. KEPPLER & H. BIESTER (Germany)

Laboratory measurements

- 455 Fluorinated natural products: the biosynthesis of fluoroacetate and 4-fluorothreonine in *Streptomyces cattleya*
C. D. MURPHY, C. SCHAFFRATH & D. O'HAGAN (UK)
- 463 UV-light induced mineralization of organic matter bound chlorine in Lake Bjän, Sweden—a laboratory study
S. A. KARLSSON & G. ÖBERG (Sweden)
- 471 Do vesicle cells of the red alga *Asparagopsis* (*Falkenbergia* stage) play a role in bromocarbon production?
R. A. MARSHALL, J. T. G. HAMILTON, M. J. DRING & D. B. HARPER (UK)
- 477 Formation of volatile iodinated alkanes in soil: results from laboratory studies
F. KEPPLER, R. BORCHERS, P. ELSNER, I. FAHIMI, J. PRACT & H. F. SCHÖLER (Germany)
- 485 Halogen production from aqueous tropospheric particles
H. HERRMANN, Z. MAJDIK, B. ERVENS & D. WEISE (Germany)

- 503 Stereoselective biosynthesis of chloroarylpropane diols by the basidiomycete *Bjerkandera adusta*
P. J. SILK & J. B. MACAULAY (Canada)
- 513 Formation of chloroacetic acids from soil, humic acid and phenolic moieties
I. J. FAHIMI, F. KEPPLER & H. F. SCHÖLER (Germany)

Regulations

- 521 Scientific activities of Euro Chlor in monitoring and assessing naturally and man-made organohalogens
A. J. LECLOUX (Belgium)
- 531 Environmental risk assessment of airborne trichloroacetic acid—a contribution to the discussion on the significance of anthropogenic and natural sources
J. AHLERS, J. REGELMANN & C. RIEDHAMMER (Germany)

Volume 52 No. 3

SPECIAL ISSUE: BIOGEOCHEMICAL PROCESSES AND CYCLING OF ELEMENTS IN THE ENVIRONMENT

- 539 Preface and acknowledgments
- 541 Oxalate production by wood-rotting fungi growing in toxic metal-amended medium
A. JAROSZ-WILKOLAZKA (Poland) & G. M. GADD (UK)
- 549 Release of substituents from phenolic compounds during oxidative coupling reactions
J. DEC (USA), K. HAIDER (Germany) & J.-M. BOLLAG (USA)
- 557 Variation of stabilised, microbial and biologically active carbon and nitrogen in soil under contrasting land use and agricultural management practices
O. DILLY, H.-P. BLUME, U. SEHY, M. JIMENEZ & J. C. MUNCH (Germany)
- 571 Effects of several low-molecular weight organic acids and phosphate on the adsorption of acid phosphatase by soil colloids and minerals
Q. HUANG, Z. ZHAO & W. CHEN (China)
- 581 The dynamics of exchangeable cations in the environment of soils at Kampinoski National Park
D. CZEPINSKA-KAMINSKA, K. KONECKA-BETLEY & E. JANOWSKA (Poland)
- 585 Forms and distribution of selenium at different depths and among particle size fractions of three Taiwan soils
M. C. WANG & H. M. CHEN (Taiwan, ROC)
- 595 Accumulation of nutrients in soils affected by perennial colonies of piscivorous birds with reference to biogeochemical cycles of elements
S. LIGEZA & H. SMAL (Poland)
- 603 Seasonal changes of CO₂, CH₄ and N₂O fluxes in relation to land-use change in tropical peatlands located in coastal area of South Kalimantan
K. INUBUSHI, Y. FURUKAWA (Japan), A. HADI, E. PURNOMO (Indonesia) & H. TSURUTA (Japan)
- 609 Fluxes of methane, carbon dioxide and nitrous oxide in boreal lakes and potential anthropogenic effects on the aquatic greenhouse gas emissions
J. T. HUTTUNEN, J. ALM, A. LIIKANEN, S. JUUTINEN, T. LARMOLA, T. HAMMAR, J. SILVOLA & P. J. MARTIKAINEN (Finland)
- 623 Arsenic behavior in newly drilled wells
M.-J. KIM (Korea), J. NRIAGU & S. HAACK (USA)
- 635 Total mercury concentrations in an industrialized catchment, the Thur River basin (north-eastern France): geochemical background level and contamination factors
S. RÉMY, P. PRUDENT, C. HISSLER, J. L. PROBST & G. KREMPP (France)
- 645 Horizontal and vertical variabilities of mercury concentration and speciation in sediments of the Gdansk Basin, Southern Baltic Sea
J. BELDOWSKI & J. PEMPKOWIAK (Poland)

Volume 52 No. 4

PERSISTENT ORGANIC POLLUTANTS AND DIOXINS

- 655 Functional activation of arylhydrocarbon receptor (AhR) in primary T cells by 2,3,7,8-tetrachlorodibenzo-*p*-dioxin
H. DOI, T. BABA, C. TOHYAMA & K. NOHARA (Japan)
- 663 Biodegradation capability of *Absidia fusca* Linnemann towards environmental pollutants
P. GUIRAUD, D. VILLEMAIN, M. KADRI (France), O. BORDJIBA (Algeria) & R. STEIMAN (France)
- 673 Biodegradation of phthalate esters during the mesophilic anaerobic digestion of sludge
H. N. GAVALA (Denmark), F. ALATRISTE-MONDRAGON, R. IRANPOUR (USA) & B. K. AHRING (Denmark, USA)
- 683 Seasonal change of persistent organic pollutant concentrations in air at Niigata area, Japan
H. MURAYAMA, Y. TAKASE, H. MITOBE, H. MUKAI, T. OHZEKI, K.-I. SHIMIZU & Y. KITAYAMA (Japan)
- 695 Development of expanded and core kinetic models for the gas phase formation of dioxins from chlorinated phenols
L. KHACHATRYAN (USA), R. ASATRYAN (Armenia) & B. DELLINGER (USA)
- 709 Formation of chlorinated hydrocarbons from the reaction of chlorine atoms and activated carbon
L. KHACHATRYAN & B. DELLINGER (USA)
- 717 DDT is still a problem in developed countries: the heavy pollution of Lake Maggiore
A. BINELLI & A. PROVINI (Italy)
- 725 Survey of commercial pasteurised cows' milk in Wallonia (Belgium) for the occurrence of polychlorinated dibenzo-*p*-dioxins, dibenzofurans and coplanar polychlorinated biphenyls
J.-F. FOCANT, C. PIRARD, A.-C. MASSART & E. DE PAUW (Belgium)
- 735 Chlorobenzenes removal from municipal solid waste incineration fly ash by surfactant-assisted column flotation
Y. HUANG, M. TAKAOKA & N. TAKEDA (Japan)
- 745 Polychlorinated dibenzofurans/dibenzo-*p*-dioxins (PCDF/PCDDs) and other dioxin-like substances in marine organisms from the Grenland fjords, S. Norway, 1975–2001: present contamination levels, trends and species specific accumulation of PCDF/PCDD congeners
J. KNUTZEN, B. BJERKENG, K. NÆS & M. SCHLABACH (Norway)
- 761 Analyses of known and new types of polyhalogenated aromatic substances in oven ash from recycled aluminium production
S. SINKKONEN, M. LAHTIPERÄ, A. VATTULAINEN (Finland), V. V. TAKHISTOV, I. V. VIKTOROVSKII, V. A. UTSAL (Russia) & J. PAASIVIRTA (Finland)
- 777 PCB congener distributions in muscle, liver and gonad of *Fundulus heteroclitus* from the lower Hudson River Estuary and Newark Bay
E. MONOSSON, J. T. F. ASHLEY, A. E. MCELROY, D. WOLTERING & A. A. ELSKUS (USA)

Volume 52 No. 5

ENVIRONMENTAL CHEMISTRY

- 789 Conifer needles as passive biomonitors of the spatial and temporal distribution of DDT from a point source
A. DI GUARDO, S. ZACCARA, B. CERABOLINI, M. ACCIARRI, G. TERZAGHI & D. CALAMARI (Italy)
- 799 Effect of glyphosate on the microbial activity of two Brazilian soils
A. S. F. ARAÚJO, R. T. R. MONTEIRO & R. B. ABARKELI (Brazil)
- 805 Carbonyl compounds in the urban environment of Athens, Greece
E. B. BAKEAS, D. I. ARGYRIS & P. A. SISKOS (Greece)
- 815 A high performance liquid chromatography method for determination of gas-phase hydrogen peroxide in ambient air using Fenton's chemistry
J. LIU, S. M. STEINBERG & B. J. JOHNSON (USA)

- 825 Evaluation of activated carbon fiber filter for sampling of organochlorine pesticides in environmental water samples
H. MURAYAMA, N. MORIYAMA, H. MITOBE, H. MUKAI, Y. TAKASE, K.-I. SHIMIZU & Y. KITAYAMA (Japan)
- 835 Removal of mercury (II) from aqueous solution by activated carbon obtained from furfural
M. F. YARDIM (Turkey), T. BUDINOVA (Bulgaria), E. EKINCI (Turkey), N. PETROV, M. RAZVIGOROVA & V. MINKOVA (Bulgaria)
- 843 Photocatalytic production of hydrogen in single component and mixture systems of electron donors and monitoring adsorption of donors by in situ infrared spectroscopy
Y. LI, G. LU & S. LI (PR China)
- 851 Photodegradation mechanism for bisphenol A at the $\text{TiO}_2/\text{H}_2\text{O}$ interfaces
N. WATANABE, S. HORIKOSHI, H. KAWABE, Y. SUGIE (Japan), J. ZHAO (China) & H. HIDAKA (Japan)
- 861 Biodegradation of potential diesel oxygenate additives: dibutyl maleate (DBM), and tripropylene glycol methyl ether (TGME)
A. A. MARCHETTI, M. G. KNIZE, M. L. CHIARAPPA-ZUCCA, R. J. PLETCHER & D. W. LAYTON (USA)
- 869 Estimation of selected physicochemical properties for methylated naphthalene compounds
P. DIMITRIOU-CHRISTIDIS, B. C. HARRIS, T. J. McDONALD, E. REESE & R. L. AUTENRIETH (USA)
- 883 Ionic composition of PM_{10} in the area of Thessaloniki, Greece
R. TSITOURIDOU, D. VOUTSA & TH. KOUIMTZIS (Greece)
- 893 Behavior of 1,3-dichloropropene and methyl isothiocyanate in undisturbed soil columns
N. EL HADIRI, M. AMMATI, M. CHGOURA & K. MOUNIR (Morocco)
- 901 Contribution of dissolved sulfates and sulfites in hydrogen sulfide emission from stagnant water bodies in Sri Lanka
K. I. A. KULARATNE, D. P. DISSANAYAKE & K. R. R. MAHANAMA (Sri Lanka)
- 909 Removal of organic polyelectrolytes and their metal complexes by adsorption onto xonotlite
H. KATSUMATA, S. KANEKO, R. MATSUNO, K. ITOH, K. MASUYAMA, T. SUZUKI, K. FUNASAKA & K. OHTA (Japan)
- 917 Studies on the sorption behaviors of nitrobenzene on marine sediments
X.-K. ZHAO, G.-P. YANG & X.-C. GAO (PR China)
- 927 Behavior of methyl isothiocyanate in soils under field conditions in Morocco
N. EL HADIRI, M. AMMATI, M. CHGOURA & K. MOUNIR (Morocco)
- 933 Are data on light-induced ammonium release from dissolved organic matter consistent?
W. GRZYBOWSKI (Poland)
- 937 On the sedimentary occurrence of chlorophyllone *a*
N. AYDIN, S. DAHER & F. O. GÜLAÇAR (Switzerland)

Volume 52 No. 6

SCIENCE FOR ENVIRONMENTAL TECHNOLOGY

- 943 Wet air oxidation of a reactive dye solution using $\text{CoAlPO}_4\text{-5}$ and CeO_2 catalysts
D.-J. CHANG, I.-P. CHEN, M.-T. CHEN & S.-S. LIN (Taiwan)
- 951 $\text{CO}_2\text{-H}_2$ -dependent anaerobic biotransformation of phthalic acid isomers in sediment slurries
S.-M. LIU & W.-C. CHI (Taiwan)
- 959 Characterization of lead, cadmium, arsenic and nickel in $\text{PM}_{2.5}$ particles in the Athens atmosphere, Greece
N. S. THOMAIDIS, E. B. BAKEAS & P. A. SISKOS (Greece)
- 967 Comparative studies of fungal degradation of single or mixed bioaccessible reactive azo dyes
M. A. M. MARTINS, N. LIMA, A. J. D. SILVESTRE & M. J. QUEIROZ (Portugal)
- 975 Effects of temperature on mineralisation of petroleum in contaminated Antarctic terrestrial sediments
S. H. FERGUSON, P. D. FRANZMANN, I. SNAPE, A. T. REVILL, M. G. TREFRY & L. R. ZAPPAL (Australia)

- 989 Removal of ammonia solutions used in catalytic wet oxidation processes
C.-M. HUNG, J.-C. LOU & C.-H. LIN (Taiwan, ROC)
- 997 Treatment of coke-plant wastewater by biofilm systems for removal of organic compounds and nitrogen
Y. M. LI, G. W. GU, J. F. ZHAO, H. Q. YU, Y. L. QIU & Y. Z. PENG (China)
- 1007 Indoor and outdoor carbon monoxide concentration relationships at different microenvironments in the Athens area
A. CHALOULAKOU, I. MAVROIDIS & A. DUCI (Greece)
- 1021 Equilibrium studies for the sorption of lead from effluents using chitosan
J. C. Y. NG, W. H. CHEUNG & G. MCKAY (Hong Kong)
- 1031 Growth conditions, elemental accumulation and induced physiological changes in Chinese cabbage
D. A. MORENO, G. VÍLLORA, J. M. RUIZ & L. ROMERO (Spain)
- 1041 Noble metal catalysts for methane removal
A. JANBEY, W. CLARK, E. NOORDALLY, S. GRIMES & S. TAHIR (UK)
- 1047 Toxic by-products from the combustion of Kraft lignin
R. FONT, M. ESPERANZA & A. NURIA GARCÍA (Spain)
- 1059 Chromium species behaviour in the activated sludge process
A. S. STASINAKIS, N. S. THOMADIS, D. MAMAS, M. KARIVALI & T. D. LEKKAS (Greece)
- 1069 Mechanism and kinetic model for the decolorization of the azo dye Reactive Black 5 by hydrogen peroxide and UV radiation
A. M. EL-DEIN, J. A. LIBRA & U. WIESMANN (Germany)
- 1079 Atmospheric lead concentration distribution in Northern Taiwan
H.-C. LU, C.-J. TSAI & I.-F. HUNG (Taiwan)
- 1089 Leaching behavior and chemical stability of copper butyl xanthate complex under acidic conditions
Y.-K. CHANG, J.-E. CHANG & L.-C. CHIANG (Taiwan, ROC)

Volume 52 No. 7**ENVIRONMENTAL TOXICOLOGY AND RISK ASSESSMENT**

- 1095 Effects of sampling, preparation and defecation on metal concentrations in selected invertebrates at urban sites
B. ZÖDL & K. J. WITTMANN (Austria)
- 1105 Response of multixenobiotic defence mechanism in *Dreissena polymorpha* exposed to environmental stress
S. PAIN & M. PARANT (France)
- 1115 Frozen mitochondria as rapid water quality bioassay
A. IERO, S. MANENTE, G. PERIN & M. BRAGADIN (Italy)
- 1125 Toxicity of fluoranthene and its biodegradation metabolites to aquatic organisms
E. ŠEPIČ H. LESKOVŠEK (Slovenia)
- 1135 Comparison of biomarker and pathological responses in flounder (*Platichthys flesus* L.) induced by ingested polycyclic aromatic hydrocarbon (PAH) contamination
W. J. REYNOLDS, S. W. FEIST, G. J. JONES, B. P. LYONS, D. A. SHEAHAN & G. D. STENTIFORD (UK)
- 1147 Lysosomal membrane stability, phagocytosis and tolerance to emersion in the mussel *Perna viridis* (Bivalvia: Mytilidae) following exposure to acute, sublethal, copper
S. NICHOLSON (Hong Kong)
- 1153 The evaluation of the equilibrium partitioning method using sensitivity distributions of species in water and soil
P. VAN BELEN, E. M. J. VERBRUGGEN & W. J. G. M. PEIJNENBURG (The Netherlands)
- 1163 Oxidative DNA damage estimated by urinary 8-hydroxydeoxyguanosine: influence of taxi driving, smoking and areca chewing
C.-Y. CHUANG, C.-C. LEE, Y.-K. CHANG & F.-C. SUNG (Taiwan)
- 1173 Estrogenicity and acute toxicity of selected anilines using a recombinant yeast assay
E. L. HAMBLIN (USA), M. T. D. CRONIN (UK) & T. W. SCHULTZ (USA)

- 1183 AFLP analysis as biomarker of exposure to organic and inorganic genotoxic substances in plants
M. LABRA, T. DI FABIO, F. GRASSI, S. M. G. REGONDI, M. BRACALE, C. VANNINI & E. AGRADI (Italy)
- 1189 Aquatic toxicity of glyphosate-based formulations: comparison between different organisms and the effects of environmental factors
M. T. K. TSUI & L. M. CHU (China)
- 1199 Quantification of joint effect for hydrogen bond and development of QSARs for predicting mixture toxicity
Z. LIN, P. ZHONG, K. YIN, L. WANG & H. YU (PR China)
- 1209 Integrative assessment of marine pollution in Galician estuaries using sediment chemistry, mussel bioaccumulation, and embryo-larval toxicity bioassays
R. BEIRAS, N. FERNÁNDEZ, J. BELLAS, V. BESADA, A. GONZÁLEZ-QUIJANO & T. NUNES (Spain)
- 1225 Ozonation of an azo dye C.I. Remazol Black 5 and toxicological assessment of its oxidation products
C. WANG (PR China), A. YEDILER, D. LIENERT (Germany), Z. WANG (PR China) & A. KETTRUP (Germany)
- 1233 Phytotoxicity to and uptake of enrofloxacin in crop plants
L. MIGLIORE, S. COZZOLINO & M. FIORI (Italy)
- 1245 Effect of lead on growth and nitrate assimilation of *Vigna radiata* (L.) Wilczek seedlings in a salt affected environment
R. P. SINGH, R. D. TRIPATHI, S. DABAS, S. M. H. RIZVI (India), M. B. ALI (South Korea), S. K. SINHA, D. K. GUPTA, S. MISHRA & U. N. RAI (India)
- 1251 Cadmium, chromium and lead contamination of *Athene noctua*, the little owl, of Bologna and Parma, Italy
A. ZACCARONI, M. AMORENA, B. NASO, G. CASTELLANI, A. LUCISANO & G. L. STRACCIARI (Italy)
- 1259 Chemical evidence and risks associated with soybean and rapeseed meal fermentation
A. STURARO, R. RELLA, G. PARVOLI, D. FERRARA & L. DORETTI (Italy)

Volume 52 No. 8

GLOBAL CHANGE SCIENCE

- 1263 Increasing UV-B radiation at the earth's surface and potential effects on aqueous mercury cycling and toxicity
J.-C. J. BONZONGO & A. K. DONKOR (USA)
- 1275 Methane and carbon dioxide emissions from Shan-Chu-Ku landfill site in northern Taiwan
U. HEGDE, T.-C. CHANG & S.-S. YANG (Taiwan, ROC)
- 1287 Effect of ammonium and oxygen on methane and nitrous oxide fluxes across sediment-water interface in a eutrophic lake
A. LIIKANEN & P. J. MARTIKAINEN (Finland)
- 1295 Estimation of methane and nitrous oxide emission from paddy fields and uplands during 1990–2000 in Taiwan
S.-S. YANG, C.-M. LIU, C.-M. LAI & Y.-L. LIU (Taiwan)
- 1307 Methods for sampling and analysis of tropospheric ethanol in gaseous and aqueous phases
A. MONOD, N. BONNEFOY, P. KALUZNY, I. DENIS, P. FOSTER & P. CARLIER (France)
- 1321 Marine sulfur cycling and the atmospheric aerosol over the springtime North Atlantic
M. O. ANDREAE, T. W. ANDREAE, D. MEYERDIERKS & C. THIEL (Germany)

Volume 52 No. 9

SPECIAL ISSUE: ENVIRONMENTAL AND PUBLIC HEALTH MANAGEMENT

- 1345 Preface

Global environmental health issues

- 1347 Human health and environmental risk assessment: the need for a more harmonised and integrated approach
J. BRIDGES (UK)

- 1353 A global health problem caused by arsenic from natural sources
J. C. NG, J. WANG & A. SHRAIM (Australia)
- 1361 Some aspects of toxic contaminants in herbal medicines
K. CHAN (PR China)
- 1373 Double trouble: health risks of accidental sewage release
O. BRIDGES (UK)

Air quality

- 1381 Estimation of methane and nitrous oxide emission from animal production sector in Taiwan during 1990–2000
S.-S. YANG, C.-M. LIU & Y.-L. LIU (Taiwan)
- 1389 Levels of PCDD/FS in ambient air and soil in the vicinity of a municipal solid waste incinerator in Hsinchu
P.-S. CHENG, M.-S. HSU, E. MA, U. CHOU & Y.-C. LING (Taiwan, ROC)
- 1397 A preliminary investigation of persistent organic pollutants in ambient air in Hong Kong
P. K. K. LOUIE & D. W.-M. SIN (China)
- 1405 A study of ozone variation trend within area of affecting human health in Hong Kong
X. WANG, W. LU, W. WANG & A. Y. T. LEUNG (PR China)
- 1411 Persistent organic pollutants in environment of the Pearl River Delta, China: an overview
J. FU, B. MAI, G. SHENG, G. ZHANG, X. WANG, P. PENG, X. XIAO, R. RAN, F. CHENG, X. PENG (China),
Z. WANG & U. W. TANG (Macao)
- 1423 Fate and assessment of persistent organic pollutants in water and sediment from Minjiang River Estuary, Southeast China
Z. L. ZHANG, H. S. HONG (China), J. L. ZHOU (UK), J. HUANG & G. YU (China)
- 1431 Assessment of metal and nutrient concentrations in river water and sediment collected from the cities in the Pearl River Delta, South China
K. C. CHEUNG, B. H. T. POON, C. Y. LAN & M. H. WONG (China)
- 1441 Chemical and microbiological qualities of The East River (Dongjiang) water, with particular reference to drinking water supply in Hong Kong
K. C. HO, Y. L. CHOW & J. T. S. YAU (Hong Kong)
- 1451 A preliminary study on potential of developing shower/laundry wastewater reclamation and reuse system
W. LU & A. Y. T. LEUNG (PR China)

Soil quality

- 1461 Winter runoff losses of phosphorus from paddy soils in the Taihu Lake Region of South China
H. ZHANG, Z. CAO, G. WANG, H. ZHANG & M. H. WONG (China)
- 1467 Correlations between cadmium and mineral nutrients in absorption and accumulation in various genotypes of rice under cadmium stress
J. G. LIU, J. S. LIANG, K. Q. LI, Z. J. ZHANG, B. Y. YU, X. L. LU, J. C. YANG & Q. S. ZHU (China)
- 1475 Fluoride and aluminium concentrations of tea plants and tea products from Sichuan Province, PR China
W. S. SHU, Z. Q. ZHANG, C. Y. LAN & M. H. WONG (People's Republic of China)
- 1483 Use of a multi-layer column device for study on leachability of nitrate in sludge-amended soils
Y. LUO, X. QIAO, J. SONG (PR China), P. CHRISTIE (UK) & M. WONG (China)
- 1489 Microbial population of spruce soil in Tatachia mountain of Taiwan
S.-S. YANG, H.-Y. FAN, C.-K. YANG & I.-C. LIN (Taiwan, ROC)

Bioremediation of contaminants

- 1499 Microbial enhancement of Cu^{2+} removal capacity of *Eichhornia crassipes* (Mart.)
L. M. SO, L. M. CHU & P. K. WONG (China)
- 1505 Microbial activity during composting of anthracene-contaminated soil
Y. MA (Hong Kong), J. Y. ZHANG (China) & M. H. WONG (Hong Kong)

- 1515 Biodegradability of Atrazine, Cyanazine and Dicamba under methanogenic condition in three soils of China
J.-G. GU, Y. FAN & J.-D. GU (PR China)
- 1523 Reduction of chromate (CrO_4^{2-}) by an enrichment consortium and an isolate of marine sulfate-reducing bacteria
K. H. CHEUNG & J.-D. GU (PR China)
- 1531 Removal of biocide pentachlorophenol in water system by the spent mushroom compost of *Pleurotus pulmonarius*
W. M. LAW, W. N. LAU, K. L. LO, L. M. WAI & S. W. CHIU (China)
- 1539 Use of spent mushroom compost to bioremediate PAH-contaminated samples
K. L. LAU, Y. Y. TSANG & S. W. CHIU (China)
- 1547 Nitrous oxide flux from landfill leachate-sawdust nitrogenous compost
C. H. HUI, M. K. SO, C. M. LEE & G. Y. S. CHAN (PR China)

Phytoremediation of contaminants

- 1553 Basic processes in phytoremediation and some applications to air pollution control
H. MORIKAWA & Ö. C. ERKIN (Japan)
- 1559 Physiological aspects of vetiver grass for rehabilitation in abandoned metalliferous mine wastes
J. PANG (PR China), G. S. Y. CHAN, J. ZHANG (Hong Kong), J. LIANG (PR China) & M. H. WONG (Hong Kong)
- 1571 Possible use of constructed wetland to remove selenocyanate, arsenic, and boron from electric utility wastewater
Z. H. YE, Z.-Q. LIN, S. N. WHITING, M. P. DE SOUZA & N. TERRY (USA)
- 1581 Negative effects of humic acid addition on phytoremediation of pyrene-contaminated sediments by mangrove seedlings
L. KE, T. W. Y. WONG, A. H. Y. WONG, Y. S. WONG & N. F. Y. TAM (Hong Kong)
- 1593 Growth and metal accumulation in vetiver and two *Sesbania* species on lead/zinc mine tailings
B. YANG, W. S. SHU, Z. H. YE, C. Y. LAN & M. H. WONG (PR China)

Assessments of contaminants

- 1601 Statistical visualization for data exploration: a case study on Sydney Olympic Park
Q. SHAO, Y. LI, E. CAMPBELL, E. S. DE BOER, E. LAGINESTRA & A. STATZENKO (Australia)
- 1615 Simulation of transboundary pollutant transport action in the Pearl River delta
K. W. CHAU & Y. W. JIANG (Hong Kong)
- 1623 Investigation of new indirect spectrophotometric method for the determination of carbofuran in carbamate pesticides
M. R. JAN, J. SHAH & H. KHAN (Pakistan)
- 1627 Gas chromatography/mass spectrometry applied for the analysis of triazine herbicides in environmental waters
W. T. MA, K. K. FU, Z. CAI (China) & G. B. JIANG (PR China)
- 1633 HPLC pigment analysis of marine phytoplankton during a red tide occurrence in Tolo Harbour, Hong Kong
C. KWAN WONG & C. KIM WONG (China)
- 1641 The mutagenic potentials of tap water samples in Shanghai
L. SHEN, J.-Y. WU, G.-F. LIN, J.-H. SHEN (China), J. WESTENDORF & H. HUEHNERFUSS (Germany)
- 1647 Spatial and temporal organic and heavy metal pollution at Mai Po Marshes Nature Reserve, Hong Kong
Y. LIANG & M. H. WONG (PR China)
- 1659 Differential expression of CYP1A1 mRNA in gill, intestine and liver of tilapia fed with PCB Aroclor-1254 and Aroclor-1260 spiked food
H. Y. YEUNG, C. C. WONG, M. H. WONG & C. K. C. WONG (Hong Kong)

Volume 52 No. 10

ENVIRONMENTAL CHEMISTRY

- 1667 Study of factors affecting on the extraction efficiency of polycyclic aromatic hydrocarbons from soils using open-vessel focused microwave-assisted extraction
Y. Y. SHU, T. L. LAI, H.-S. LIN, T. C. YANG & C.-P. CHANG (Taiwan, ROC)
- 1677 Temporal variation of fluoride concentration in antlers of roe deer (*Capreolus capreolus*) living in an area exposed to emissions from iron and steel industry, 1948–2000
U. KIERDORF & H. KIERDORF (Germany)
- 1683 Heavy metal monitoring of marine algae from the Turkish Coast of the Black Sea, 1998–2000
S. TOPCUOĞLU, K. C. GÜVEN, N. BALKIS & Ç. KIRBAŞOĞLU (Turkey)
- 1689 HQSAR and CoMFA approaches in predicting reactivity of halogenated compounds with hydroxyl radicals
M. VRTAČNIK & K. VODA (Slovenia)
- 1701 Relation between extracellular polymers' composition and its ability to complex Cd, Cu and Pb
G. GUIBAUD, N. TIXIER, A. BOUJU & M. BAUDU (France)
- 1711 Contamination of polycyclic aromatic hydrocarbons (PAHs) in microlayer and subsurface waters along Alexandria coast, Egypt
A. EL NEMR & A. M. A. ABD-ALLAH (Egypt)
- 1717 Physicochemical soil parameters affecting sequestration and mycobacterial biodegradation of polycyclic aromatic hydrocarbons in soil
B. W. BOGAN & W. R. SULLIVAN (USA)
- 1727 The contribution of particles washed from rooftops to contaminant loading to urban streams
P. C. VAN METRE & B. J. MAHLER (USA)
- 1743 Aerobic biodegradability of methyl-diethanolamine (MDEA) used in natural gas sweetening plants in batch tests and continuous flow experiments
M. FÜRHACKER, A. PRESSL & R. ALLABASHI (Austria)
- 1749 Effects of Fe₂O₃, organic matter and carbonate on photocatalytic degradation of lindane in the sediment from the Liao River, China
X. QUAN, J. NIU, S. CHEN, J. CHEN, Y. ZHAO & F. YANG (P.R. China)
- 1757 Fate of pharmaceuticals—photodegradation by simulated solar UV-light
T. E. DOLL & F. H. FRIMMEL (Germany)
- 1771 Ageing of chromium(III)-bearing slag and its relation to the atmospheric oxidation of solid chromium(III)-oxide in the presence of calcium oxide
K. PILLAY, H. VON BLOTTNITZ & J. PETERSEN (South Africa)
- 1781 Self-purification ability of a resurgence stream
R. VAGNETTI, P. MIANA, M. FABRIS & B. PAVONI (Italy)
- 1797 Optimizing electron spin resonance detection of hydroxyl radical in water
S.-A. CHENG, W.-K. FUNG, K.-Y. CHAN & P. K. SHEN (China)
- 1807 Thermal and spectroscopic studies on sorption of nickel(II) ion on protonated baker's yeast
V. PADMAVATHY, P. VASUDEVAN & S. C. DHINGRA (India)
- 1819 Competitive diesel engine emissions of sulphur and nitrogen species
A. DURÁN, M. CARMONA & R. BALLESTEROS (Spain)